Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-19. (Cancelled)

20. (Original) A DNAzyme which specifically cleaves EGR-1 mRNA, the DNAzyme comprising

(i) a catalytic domain which cleaves mRNA at a purine:pyrimidine cleavage site;

(ii) a first binding domain continuous with the 5' end of the catalytic domain; and

(iii) a second binding domain continuous with the 3' end of the catalytic domain,

wherein the binding domains are sufficiently complementary to the two regions immediately flanking a purine:pyrimidine cleavage site within the region of EGR-1 mRNA corresponding to nucleotides 168-332 as shown in SEQ ID No: 1, such that the DNAzyme cleaves the EGR-1 mRNA.

21. (Original) A DNAzyme as claimed in claim 20 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

22. (Original) A DNAzyme as claimed in claim 20 in which the cleavage site is selected from the group consisting of

(i) the GU site corresponding to nucleotides 198-199;

(ii) the GU site corresponding to nucleotides 200-201;

(iii) the GU site corresponding to nucleotides 264-265;

(iv) the AU site corresponding to nucleotides 271-272;

(v) the AU site corresponding to nucleotides 301-302;

(vi) the GU site corresponding to nucleotides 303-304; and

(vii) the AU site corresponding to nucleotides 316-317.

23. (Original) A DNAzyme as claimed in claim 22 in which the cleavage site is the AU site corresponding to nucleotides 271-272.

24. (Original) A DNAzyme as claimed in claim 22 wherein the 3'-end nucleotide residue is inverted in the

binding domain contiguous with the 3'-end of the catalytic domain.

25. (Original) A DNAzyme as claimed in claim 23 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

26. (Original) A-DNAzyme as claimed in claim 20 in which the catalytic domain has the nucleotide sequence GGCTAGCTACAACGA [SEQ. ID. NO:2].

27. (Original) A DNAzyme as claimed in claim 26 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

28. (Original) A DNAzyme as claimed in claim 26 in which the cleavage site is selected from the group consisting of

(i) the GU site corresponding to nucleotides 198-199;

(ii) the GU site corresponding to nucleotides 200-201 ;

(iii) the GU site corresponding to nucleotides 264-265;

(iv) the AU site corresponding to nucleotides 271-272;

(v) the AU site corresponding to nucleotides 301-302;

(vi) the GU site corresponding to nucleotides 303-304; and

(vii) the AU site corresponding to nucleotides 316-317.

29. (Original) A DNAzyme as claimed in claim 28 in which the cleavage site is the AU site corresponding to nucleotides 271-272.

30. (Original) A DNAzyme as claimed in claim 28 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

31. (Original) A DNAzyme as claimed in claim 29 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

32. (Original) A DNAzyme as claimed in claim 20 wherein each binding domain is nine or more nucleotides in length.

33. (Original) A DNAzyme as claimed in claim 32 wherein the 3'-end nucleotide residue is inverted in the

binding domain contiguous with the 3'-end of the catalytic domain.

34. (Original) A DNAzyme as claimed in claim 32 in which the cleavage site is selected from the group consisting of

(i) the GU site corresponding to nucleotides 198-199;

(ii) the GU site corresponding to nucleotides 200-201 ;

(iii) the GU site corresponding to nucleotides 264-265;

(iv) the AU site corresponding to nucleotides 271-272;

(v) the AU site corresponding to nucleotides 301-302;

(vi) the GU site corresponding to nucleotides 303-304; and

(vii) the AU site corresponding to nucleotides 316-317.

35. (Original) A DNAzyme as claimed in claim 34 in which the cleavage site is the AU site corresponding to nucleotides 271-272.

36. (Original) A DNAzyme as claimed in claim 34 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

37. (Original) A DNAzyme as claimed in claim 35 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

38. (Original) A DNAzyme as claimed in claim 32 in which the catalytic domain has the nucleotide sequence GGCTAGCTACAACGA [SEQ ID NO: 2].

39. (Original) A DNAzyme as claimed in claim 38 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

40. (Original) A DNAzyme as claimed in claim 38 in which the cleavage site is selected from the group consisting of

(i) the GU site corresponding to nucleotides 198-199;

(ii) the GU site corresponding to nucleotides 200-201;

(iii) the GU site corresponding to nucleotides 264-265;

(iv) the AU site corresponding to nucleotides 271-272;

(v) the AU site corresponding to nucleotides 301-302;

(vi) the GU site corresponding to nucleotides 303-304; and

(vii) the AU site corresponding to nucleotides 316-317.

41. (Original) A DNAzyme as claimed in claim 40 in which the cleavage site is the AU site corresponding to nucleotides 271-272.

42. (Original) A DNAzyme as claimed in claim 40 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

43. (Original) A DNAzyme as claimed in claim 41 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

44. (Original) A DNAzyme as claimed in claim 20 which has a sequence selected from the group consisting of:

(i) 5'-caggggacaGGCTAGCTACAACGAcgttgcggg (SEQ ID NO: 3);

(ii) 5'-tgcaggggaGGCTAGCTACAACGAaccgttgcg(SEQ ID NO: 4);

(iii) 5'-catcctggaGGCTAGCTAC AACGAgagcaggct (SEQ ID NO: 5);

(iv) 5'-ccgcggccaGGCTAGCTACAACGAcctggacga (SEQ ID NO: 6);

(v) 5'-ccgctgccaGGCTAGCTACAACGAcccggacgt (SEQ ID NO: 7);

(vi) 5'-gcggggacaGGCTAGCTACAACGAcagctgcat(SEQ ID NO: 8);

(vii) 5'-cagcggggaGGCTAGCTACAACGAatcagctgc (SEQ ID NO: 9); and

(viii) 5'-ggtcagagaGGCTAGCTACAACGActgcagcgg(SEQ ID NO: 10).

45. (Original) A DNAzyme as claimed in claim 44 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

46. (Original) A DNAzyme as claimed in claim 44 which has the sequence:

5'-ccgcggccaGGCTAGCTACAACCAcctggacga (SEQ ID NO: 6).

47. (Original) A DNAzyme as claimed in claim 46 wherein the 3'-end nucleotide residue is inverted in the binding domain contiguous with the 3'-end of the catalytic domain.

48. (Previously Presented) A pharmaceutical composition comprising a DNAzyme according to claims 20 and a pharmaceutically acceptable carrier.

49. (Previously Presented) A method of inhibiting EGR-1 activity in cells which comprises exposing the cell to a DNAzyme according to claim 20.

50. (Original) A method as claimed in claim 49 wherein the cells are vascular cells.

51. (Original) A method as claimed in any one of claims 49 wherein the cells are cells involved in neoplasia.

52. (Original) A method of inhibiting proliferation or migration of cells in a subject which comprises administering to the subject a prophylactically effective dose of the pharmaceutical composition according to claim 48.

53. (Original) A method as claimed in claim 52 wherein the cells are vascular cells.

54. (Original) A method as claimed in any one of claims 52 wherein the cells are cells involved in neoplasia.

55. (Original) A method of treating a condition associated with cell proliferation or migration in a subject which comprises administering to the subject a therapeutically effective dose of the pharmaceutical composition according to claim 48.

56. (Original) A method as claimed in claim 55 wherein the cells are vascular cells.

57. (Original) A method as claimed in any one of claims 55 wherein the cells are cells involved in neoplasia.

58. (Original) A method as claimed in claim 55 wherein the condition associated with cell proliferation or migration is selected from the group consisting of post-angioplasty restenosis, vein graft failure, hypertension, transplant coronary disease, and complications associated with atherosclerosis or peripheral vascular disease.

59. (Previously Presented) An angioplastic stent for inhibition of the onset of restenosis, which comprises an

angioplastic stent operably coated with a prophylactially effective dose of DNAzyme according to claim 20.

60. (Original) A method for inhibiting the onset of restenosis in a subject undergoing angioplasty, which comprises topically administering a prophylactically effective dose of a pharmaceutical composition according to claim 48 to the subject at around the time of the angioplasty.

61. (Original) A method according to claim 60 in which the pharmaceutical composition is administered by catheter.

62. (Original) A method for inhibiting the onset of restenosis in a subject undergoing angioplasty, which comprises topically administering a stent according to claim 58 to the subject at around the time of the angioplasty.